ALCOHOL POISONING – Mayo Clinic

Definition
Alcohol poisoning is a serious — and sometimes deadly — consequence of consuming large amounts of alcohol in a short period of time. Drinking too much too quickly can affect your breathing, heart rate and gag reflex and potentially lead to coma and death.

Binge drinking — rapidly downing 5 or more drinks in a row — is the main cause of alcohol poisoning. Alcohol poisoning can also occur when you accidentally ingest household products that contain alcohol.

A person with alcohol poisoning needs immediate medical attention. If you suspect someone has alcohol poisoning, call 911 or your local poison control center right away.

Treatment consists of providing breathing support and intravenous fluids and vitamins until the alcohol is completely eliminated from the body.

Symptoms
If you drink, have friends who drink or have children of any age, know the signs and symptoms of alcohol poisoning:

- Confusion, stupor
- Vomiting
- Seizures
- Slow breathing (less than eight breaths a minute)
- Irregular breathing
- Blue-tinged skin or pale skin
- Low body temperature (hypothermia)
- Unconsciousness ("passing out")

It’s not necessary for all of these symptoms to be present before you seek help. A person who is unconscious or can’t be roused is at risk of dying.

When to see a doctor
If you suspect that someone has alcohol poisoning — even if you don’t see the classic signs and symptoms — seek immediate medical care. In an emergency, follow these suggestions:

- If the person is unconscious, breathing less than eight times a minute or has repeated, uncontrolled vomiting, call 911 or your local emergency number immediately. Keep in mind that even when someone is unconscious or has stopped drinking, alcohol continues to be released into the bloodstream and the level of alcohol in the body continues to rise. Never assume that a person will "sleep off" alcohol poisoning.

- If the person is conscious, call 800-222-1222, and you'll automatically be routed to your local poison control center. The staff at the poison control center or emergency call center can instruct you as to whether you should take the person directly to a hospital. All calls to poison control centers are confidential.

- Be prepared to provide information. If you know, be sure to tell hospital or emergency personnel the kind and amount of alcohol the person ingested, and when.
• Don’t leave an unconscious person alone. While waiting for help, don’t try to make the person vomit. People who have alcohol poisoning have an impaired gag reflex and may choke on their own vomit or accidentally inhale (aspirate) vomit into their lungs, which could cause a fatal lung injury.

Causes
Alcohol comes in several forms, including:

• Isopropyl alcohol, which is found in rubbing alcohol, lotions and some cleaning products
• Methanol, a common ingredient in antifreeze, paints and solvents
• Ethanol — found in alcoholic beverages, mouthwash and some medications

Although alcohol poisoning can occur when you accidentally — or even intentionally — consume household products containing alcohol, most alcohol poisoning results from drinking too many alcoholic beverages, especially in a short period of time.

How much is too much?
Unlike food, which can take hours to digest, alcohol is absorbed quickly by your body — long before most other nutrients. If you drink on an empty stomach, about 20 percent of the alcohol is absorbed directly from your stomach and can reach your brain in less than a minute.

Most alcohol, though, is processed by your liver. It takes about one hour for your liver to process (metabolize) the alcohol in one drink — defined as 12 ounces (355 milliliters) of beer, 4 to 5 ounces (118 to 148 milliliters) of wine or 1.5 ounce (44 milliliters) of 80-proof distilled spirits. Mixed drinks often contain more than one serving of alcohol and take even longer to metabolize.

The rate at which alcohol is processed can vary considerably from person to person and depends on a number of factors. In general, though, drinking more than one drink an hour gives your liver more than it can handle. Binge drinking — usually defined as rapidly downing five drinks or more in a row — is especially dangerous. Drinking large quantities of alcohol so quickly means that you can consume a lethal dose before you pass out.

What happens to your body when you drink?
Alcohol depresses the nerves that control involuntary actions such as breathing, heartbeat and your gag reflex, which keeps you from choking. Excessive alcohol intake can slow and, in some cases, shut down these functions. Your body temperature can also drop (hypothermia), leading to cardiac arrest. And your blood sugar level can fall low enough to cause seizures.

Risk factors
A number of factors can increase your risk of alcohol poisoning, including:

• Your age. Young teens and college students are most likely to binge drink, and because many are first-time or inexperienced drinkers, they’re particularly vulnerable to the effects of alcohol. Yet contrary to popular belief, the majority of deaths from alcohol poisoning occur in people age 45 to 54.

• Your sex. Traditionally, boys and men have been far more likely to have alcohol poisoning — and to binge drink — than girls and women have. In recent years, however, the gap has narrowed. More women are drinking than in the past, and more are binge drinking. Women are also more
vulnerable to the effects of alcohol in general because they produce less of an enzyme that slows the release of alcohol in the stomach.

- **Your size and weight.** The smaller and thinner your build, the more quickly your body absorbs alcohol, making you more susceptible to alcohol poisoning.
- **Your overall health.** Having health problems, such as heart disease or diabetes, makes you more vulnerable to the damaging effects of alcohol.
- **Your food consumption.** Having food in your stomach slightly slows — but doesn’t prevent — alcohol from entering your bloodstream.
- **Your drug use.** Combining alcohol with other drugs — including some prescription medications — greatly increases your risk of a fatal alcohol overdose.

**Complications**
Alcohol is a stomach irritant and may cause vomiting. It also impairs your gag reflex. This increases the risk of choking on vomit if you’ve passed out from excessive drinking. There’s also a risk of accidentally inhaling vomit into your lungs, which can lead to a dangerous or fatal interruption of breathing (asphyxiation). Excessive vomiting can also result in severe dehydration.

Severe alcohol poisoning can be fatal. People who survive may have irreversible brain damage.

**Tests and diagnosis**
In addition to checking for visible signs and symptoms of alcohol poisoning, your doctor will likely order blood tests to check blood alcohol levels and identify other signs of alcohol toxicity, such as low blood sugar. A urine test also may help to confirm a diagnosis of alcohol poisoning.

**Treatments and drugs**
Alcohol poisoning treatment usually involves supportive care while your body rids itself of the alcohol. This typically includes:

- Careful monitoring
- Airway protection to prevent breathing or choking problems
- Oxygen therapy
- Administration of fluids through a vein (intravenously) to prevent dehydration

Adults and children who have accidentally ingested methanol or isopropyl alcohol may need kidney dialysis — a mechanical way of filtering waste and toxins from your system — to speed the removal of alcohol from their bloodstream.

**Lifestyle and home remedies**
Home remedies for sobering up abound, but most are ineffective, and some can be dangerous. Here’s what doesn’t work:

- Black coffee
- A cold shower — the shock of cold can cause a loss of consciousness
- Walking it off
• Sleeping it off — you can lose consciousness while asleep

If you suspect that someone has alcohol poisoning, here's what to do:

• **Stay with a person who is vomiting** and try to keep him or her sitting up. If the person must lie down, make sure to turn his or her head to the side — this helps prevent choking. Try to keep the person awake to prevent loss of consciousness.

• **Don't be afraid to get help** for a friend, even if you think it won't be appreciated. Friends don't let friends drive drunk, and they also don't let them die of alcohol poisoning.

**Prevention**

Some tips to avoid alcohol poisoning:

• **Be moderate.** To prevent alcohol poisoning, consume alcoholic beverages in moderation, if at all. Most doctors recommend no more than one drink a day for women and no more than two a day for men. When you do drink, enjoy your drink slowly.

• **Communicate with your teens.** Talk to your teenage children about the dangers of alcohol. Binge drinking increases during adolescence and usually peaks between the ages of 18 and 22, decreasing thereafter. Evidence suggests that children who are warned about alcohol by their parents and who report close relationships with their parents are less likely to start drinking.

• **Store products safely.** If you have small children in the house, store alcohol-containing products, including cosmetics and medications, out of the reach of your children. Child-proof bathroom and kitchen cabinets to prevent access to household cleaners and keep potentially toxic items in your garage or storage area safely out of reach. Consider keeping alcoholic beverages under lock and key.

• **Get follow-up care.** If you or your teen has been treated for alcohol poisoning, be sure to ask about follow-up care. Meeting with a medical social worker or counselor can help you sort through issues that may lead to binge drinking and other risky behavior. This help is available but often isn't offered — don't be afraid to ask.

**References**


